

Application for FCC Certificate
On Behalf of
LG Electronics U.S.A., Inc.

LCD Monitor

Model No.: E2411PUX

Serial No.: E20110216-02-01/02

FCC ID : BEJE2411PUX

Prepared For : LG Electronics U.S.A., Inc.
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TEST REPORT FOR FCC CERTIFICATE

Applicant : LG Electronics U.S.A., Inc.
Manufacturer : LG Electronics Nanjing Display Co., Ltd.
EUT Description : LCD Monitor
(A) Model No. : E2411PUX
(B) Serial No. : E20110216-02-01/02
(C) Power Supply : 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2009
AND ANSI C63.4-2003*

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B (Class B) and ICES-003, Issue 4 February 2004 (CISPR 22:2002) limits both radiated and conducted emissions.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report shows that the EUT (M/N: E2411PUX; S/N: E20110216-02-01/02) which was tested in 3m anechoic chamber Mar 22 – Apr 02, 2011 is technically compliance with the FCC official limits also.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

This report contains data that are not covered by the NVLAP accreditation.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Mar 22 – Apr 02, 2011 Date of Report : Apr 09, 2011

Producer : Kathy Wang
KATHY WANG / Assistant

Review : Dio Yang
DIO YANG / Deputy Assistant Manager

AUDIX[®] For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

Signatory : Sammy Chen
Authorized Signature EMC SAMMY CHEN / Deputy Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description of Test Item	Standard	Limits	Results
EMISSION			
Conducted Disturbance at the Mains Terminal	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2009 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2009 AND ANSI C63.4-2003	15.109(a) Class B	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description	: LCD Monitor
Type of EUT	: ☒ Production ☐ Pre-product ☐ Pro-type
Model No.	: E2411PUX
Serial No.	: E20110216-02-01/02
Real Power	: 17.60W
Note	: The data of E2411PUX at Rotate 90 degree condition (only radiated emission) was also tested and recorded in this report. The mode tested was the worst case of E2411PUX in normal condition.
Applicant	: LG Electronics U.S.A., Inc. 1000 Sylvan Avenue, Englewood Cliffs, NJ 07632, United States
Manufacturer	: LG Electronics Nanjing Display Co., Ltd. No.346, Yao Xin Road, Economic & Technical Development Zone, Nanjing, China
LCD Panel	: Manufacturer: AU Optronics M/N : M240HW01
Max Resolution	: 1920*1080@60Hz
D-Sub Cable #1	: Shielded, Detachable, 1.50m, with two cores on cable
D-Sub Cable #2	: Shielded, Detachable, 1.50m, with two cores in connector
DVI Cable #1	: Shielded, Detachable, 1.50m, with two cores on cable
DVI Cable #2	: Shielded, Detachable, 1.50m, with two cores in connector
Power Cord	: Unshielded, Detachable, 1.80m
Note	: The D-Sub cable #2 and DVI cable #2 were selected to be used in the test.

Remark:

The EUT is a LCD Monitor which input/output ports as follows:

Back View:

- (1) One D-Sub Port : Connected with PC
- (2) One DVI Port : Connected with PC
- (3) One Host USB Port : Connected with PC
- (4) One Audio In Port : Connected with PC
- (5) One AC In Port : Connected with Power

Side View:

- (1) One USB Port : Connected with HDD #1
- (2) One USB Port : Connected with HDD #2

2.2 Peripherals

2.2.1 PC #1

Manufacturer : HP
Model Number : dx7400MT
Serial Number : CNG8130K89
Power Cord : Unshielded, Detachable, 1.8m
Certificate : FCC DoC; CE/EMC; VCCI; C-Tick; UL
BSMI (R33001) 3C (A000111)
MIC (E-A011-04-2659(B))

2.2.2 PC #2

Manufacturer : HP
Model Number : dx7200MT
Serial Number : CNG622017W
Power Cord : Unshielded, Detachable, 1.8m
Certificate : FCC DoC; CE/EMC; VCCI; C-Tick; UL
BSMI (R33001) 3C (A000111)
MIC (E-A011-04-2659(B))

2.2.3 Printer

Manufacturer : HP
Model Number : C3990A
Serial Number : JPZX020487
Data Cable : Shielded, Detachable, 1.5m
Certificate : GS, CE/EMC, C-Tick, FCC DoC

2.2.4 Keyboard

Manufacturer : Microsoft
Model Number : RT2300
Serial Number : 7668200662248
Data Cable : Shielded, Undetachable, 1.8m
Certificate : CE/EMC, FCC DoC, VCCI, MIC,
C-Tick, BSMI

2.2.5 Mouse

Manufacturer : Microsoft
Model Number : RT2300
Serial Number : 6965712071551
Data Cable : Shielded, Undetachable, 1.8m.
Certificate : CE/EMC, FCC DoC, VCCI, MIC,
C-Tick, BSMI

2.2.6 Modem

Manufacturer : TP-LINK
Model Number : TM-EC5658V
Serial Number : 07123301053
Data Cable : Shielded, Detachable, 1.8m
Certificate : FCC DoC, CE/EMC, CCC

2.2.7 HDD #1

Manufacturer : ACCOM
Model Number : F12-UF
Serial Number : A01002224A60007

2.2.8 HDD #2

Manufacturer : ACCOM
Model Number : F12-UF
Serial Number : A01002224860006

Note: PC #1 was used in Conducted Emission test while PC #2 was used in Radiated Emission test.

2.3 Description of Test Facility

Site Description (Semi-Anechoic Chamber)	:	Sept. 17, 1998 file on Apr 29, 2009 Renewed Federal Communications Commission FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046, USA
Name of Firm	:	Audix Technology (Shanghai) Co., Ltd.
Site Location	:	3F 34Bldg 680 Guiping Rd, Caohejing Hi-Tech Park, Shanghai 200233, China
NVLAP Lab Code	:	200371-0

2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty:	U = 3.38 dB
Radiated Emission Expanded Uncertainty (30-200MHz):	
	U = 4.58 dB (horizontal)
	U = 4.70 dB (vertical)
Radiated Emission Expanded Uncertainty (200M-1GHz):	
	U = 4.84 dB (horizontal)
	U = 4.70 dB (vertical)

3 CONDUCTED EMISSION TEST

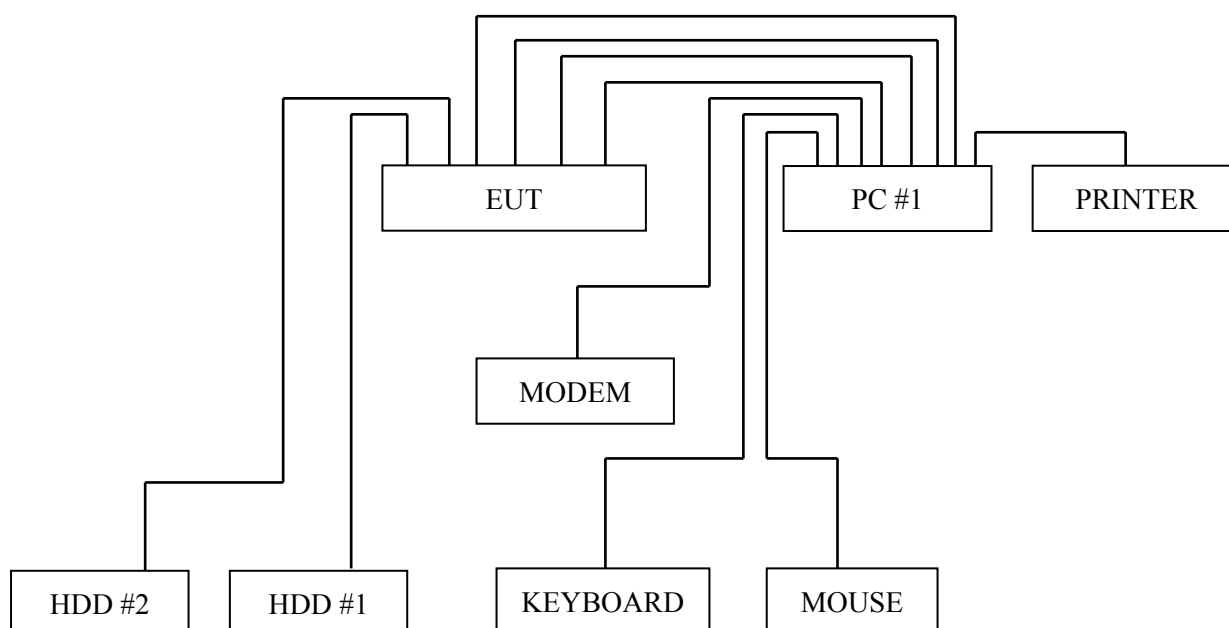
3.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

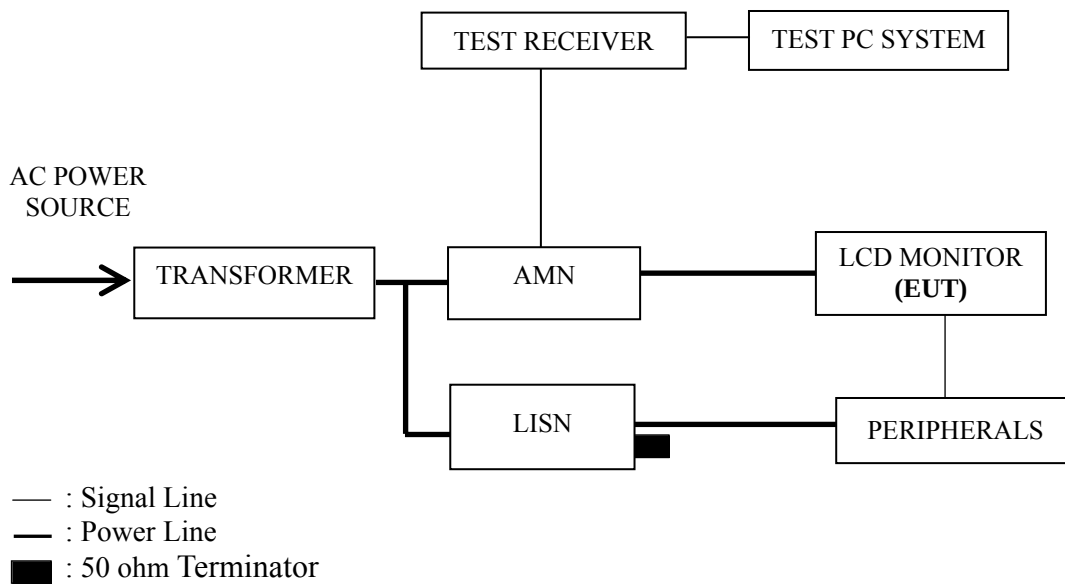
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	100841	Mar 22, 2011	Mar 22, 2012
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Mar 22, 2011	Mar 22, 2012
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Mar 22, 2011	Mar 22, 2012
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Mar 18, 2011	Sep 18, 2011
5.	50 Ω Terminator	Anritsu	BNC	001	Mar 22, 2011	Mar 22, 2012
6.	Software	Audix	E3	SET00200 9804M592	--	--

3.2 Block Diagram of Test Setup

3.2.1 EUT & Peripherals



3.2.2 Conducted Disturbance Test Setup



3.3 Conducted Emission Limit [FCC Part 15 Subpart B 15.107(a)]

Frequency Range (MHz)	Limits dB (μV)	
	Quasi-peak	Average
0.15 ~ 0.5	66~56	56~46
0.5 ~ 5	56	46
5 ~ 30	60	50
NOTE 1 – The lower limit shall apply at the transition frequencies. NOTE 2 – The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz~0.50 MHz		

3.4 Test Configuration

The EUT (listed in Sec.2.1) and the peripherals (listed in Sec 2.2) were installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner that tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

3.5.1 Setup the EUT and peripherals as shown in Sec. 3.2.

3.5.2 Turn on the power of all equipments and the EUT.

3.5.3 Set the contrast & brightness of EUT to maximum.

3.5.4 PC system ran the self-test program “EMC Test” by windows XP and sent “H” characters to EUT through graphic card, the EUT’s screen displayed and filled with “H” pattern by its resolution (Via D-Sub & DVI Input).

3.5.5 PC system played music and sent the signal to EUT through audio port, the EUT speak out the music. The HDDs connected with EUT and uploaded and downloaded data to/from PC.

3.5.6 Repeat above procedure from 3.5.3 to 3.5.5 for difference test mode.

3.5.7 The other peripherals devices were driven and operated during the test.

3.5.8 The test modes are as follows:

Test Mode
D-Sub 640*480@60Hz
D-Sub 1280*1024@75Hz
D-Sub 1680*1050@60Hz
D-Sub 1920*1080@60Hz
DVI 640*480@60Hz
DVI 1280*1024@75Hz
DVI 1680*1050@60Hz
DVI 1920*1080@60Hz

3.6 Test Procedures

The EUT and peripherals were connected to the power mains through an Artificial Mains Network (AMN). This provided a 50 ohm coupling impedance for the measuring equipment.

Both sides of AC line (Line & Neutral) were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed or manipulated according to ANSI C63.4:2003 during conducted emission test.

The bandwidth of R&S Test Receiver ESCI was set at 9 kHz.

The frequency range from 150 kHz to 30 MHz was checked.

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7.

3.7 Test Results

< PASS >

The frequency and amplitude of the highest conducted emission relative to the limit is reported. All emissions not reported below are too low against the prescribed limits.

Test Mode	Page
D-Sub 640*480@60Hz	P13
D-Sub 1280*1024@75Hz	P14
D-Sub 1680*1050@60Hz	P15
D-Sub 1920*1080@60Hz	P16
DVI 640*480@60Hz	P17
DVI 1280*1024@75Hz	P18
DVI 1680*1050@60Hz	P19
DVI 1920*1080@60Hz	P20

NOTE 1 – The **bold test mode** listed above means the worst test mode.

NOTE 2 – Factor = Cable Loss + AMN Factor.

NOTE 3 – Emission Level = Meter Reading + Factor.

NOTE 4 – “QP” means “Quasi-Peak” values, “AV” means “Average” values.

NOTE 5 – The worst case is for D-Sub 640*480@60Hz test mode. The worst emission is detected at 0.188 MHz (Quasi-Peak Value) with corrected signal level of 49.20 dB (μV) (limit is 64.11 dB (μV)), when the Neutral of the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 48%RH

Serial No. : E20110216-02-01/02 Date of Test : Feb 22, 2011

Test Mode : D-Sub 640*480@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.202	47.64	0.38	48.02	63.54	15.52	QP
	0.256	40.88	0.42	41.30	61.56	20.26	
	0.406	34.19	0.48	34.67	57.73	23.06	
	3.293	35.51	0.71	36.22	56.00	19.78	
	5.362	29.36	0.82	30.18	60.00	29.82	
	23.888	39.71	1.76	41.47	60.00	18.53	
	0.202	35.46	0.38	35.84	53.54	17.70	AV
	0.256	28.94	0.42	29.36	51.56	22.20	
	0.406	22.43	0.48	22.91	47.73	24.82	
	3.293	23.46	0.71	24.17	46.00	21.83	
	5.362	17.43	0.82	18.25	50.00	31.75	
	23.888	27.68	1.76	29.44	50.00	20.56	
Neutral	0.188	48.89	0.31	49.20	64.11	14.91	QP
	0.252	40.14	0.35	40.49	61.69	21.20	
	0.408	33.39	0.44	33.83	57.68	23.85	
	3.293	37.59	0.66	38.25	56.00	17.75	
	8.729	37.03	0.96	37.99	60.00	22.01	
	23.888	39.47	1.85	41.32	60.00	18.68	
	0.188	36.46	0.31	36.77	54.11	17.34	AV
	0.252	27.86	0.35	28.21	51.69	23.48	
	0.408	21.43	0.44	21.87	47.68	25.81	
	3.293	25.44	0.66	26.10	46.00	19.90	
	8.729	24.34	0.96	25.30	50.00	24.70	
	23.888	27.61	1.85	29.46	50.00	20.54	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 48%RH

Serial No. : E20110216-02-01/02 Date of Test : Feb 22, 2011

Test Mode : D-Sub 1280*1024@75Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.202	46.74	0.38	47.12	63.54	16.42	QP
	0.256	39.69	0.42	40.11	61.56	21.45	
	0.408	33.24	0.48	33.72	57.68	23.96	
	3.293	35.52	0.71	36.23	56.00	19.77	
	5.993	29.38	0.85	30.23	60.00	29.77	
	23.888	38.66	1.76	40.42	60.00	19.58	
	0.202	34.80	0.38	35.18	53.54	18.36	AV
	0.256	27.80	0.42	28.22	51.56	23.34	
	0.408	21.51	0.48	21.99	47.68	25.69	
	3.293	23.61	0.71	24.32	46.00	21.68	
	5.993	17.60	0.85	18.45	50.00	31.55	
	23.888	26.80	1.76	28.56	50.00	21.44	
Neutral	0.188	46.96	0.31	47.27	64.11	16.84	QP
	0.252	39.15	0.35	39.50	61.69	22.19	
	0.408	33.60	0.44	34.04	57.68	23.64	
	3.276	35.82	0.66	36.48	56.00	19.52	
	9.302	36.26	0.99	37.25	60.00	22.75	
	22.655	39.61	1.83	41.44	60.00	18.56	
	0.188	34.70	0.31	35.01	54.11	19.10	AV
	0.252	27.30	0.35	27.65	51.69	24.04	
	0.408	21.80	0.44	22.24	47.68	25.44	
	3.276	23.68	0.66	24.34	46.00	21.66	
	9.302	24.50	0.99	25.49	50.00	24.51	
	22.655	27.39	1.83	29.22	50.00	20.78	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 48%RH

Serial No. : E20110216-02-01/02 Date of Test : Feb 22, 2011

Test Mode : D-Sub 1680*1050@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.200	47.19	0.38	47.57	63.62	16.05	QP
	0.249	40.28	0.42	40.70	61.78	21.08	
	0.408	33.44	0.48	33.92	57.68	23.76	
	3.328	35.75	0.71	36.46	56.00	19.54	
	8.235	29.91	0.96	30.87	60.00	29.13	
	23.888	38.53	1.76	40.29	60.00	19.71	
	0.200	35.40	0.38	35.78	53.62	17.84	AV
	0.249	28.33	0.42	28.75	51.78	23.03	
	0.408	21.62	0.48	22.10	47.68	25.58	
	3.328	23.65	0.71	24.36	46.00	21.64	
	8.235	17.65	0.96	18.61	50.00	31.39	
	23.888	26.41	1.76	28.17	50.00	21.83	
Neutral	0.199	47.86	0.30	48.16	63.67	15.51	QP
	0.252	39.99	0.35	40.34	61.69	21.35	
	0.408	33.73	0.44	34.17	57.68	23.51	
	3.241	36.14	0.66	36.80	56.00	19.20	
	9.352	36.26	0.99	37.25	60.00	22.75	
	23.888	39.88	1.85	41.73	60.00	18.27	
	0.199	35.64	0.30	35.94	53.67	17.73	AV
	0.252	27.64	0.35	27.99	51.69	23.70	
	0.408	21.46	0.44	21.90	47.68	25.78	
	3.241	23.32	0.66	23.98	46.00	22.02	
	9.352	24.57	0.99	25.56	50.00	24.44	
	23.888	27.64	1.85	29.49	50.00	20.51	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 48%RH

Serial No. : E20110216-02-01/02 Date of Test : Feb 22, 2011

Test Mode : D-Sub 1920*1080@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.202	46.89	0.38	47.27	63.54	16.27	QP
	0.252	39.88	0.42	40.30	61.69	21.39	
	0.408	33.60	0.48	34.08	57.68	23.60	
	3.293	36.21	0.71	36.92	56.00	19.08	
	8.501	29.34	0.99	30.33	60.00	29.67	
	23.888	38.66	1.76	40.42	60.00	19.58	
	0.202	34.67	0.38	35.05	53.54	18.49	AV
	0.252	27.46	0.42	27.88	51.69	23.81	
	0.408	21.44	0.48	21.92	47.68	25.76	
	3.293	24.16	0.71	24.87	46.00	21.13	
	8.501	17.28	0.99	18.27	50.00	31.73	
	23.888	26.43	1.76	28.19	50.00	21.81	
Neutral	0.200	47.47	0.30	47.77	63.62	15.85	QP
	0.252	39.41	0.35	39.76	61.69	21.93	
	0.408	33.46	0.44	33.90	57.68	23.78	
	3.364	36.67	0.67	37.34	56.00	18.66	
	8.729	36.96	0.96	37.92	60.00	22.08	
	23.888	39.49	1.85	41.34	60.00	18.66	
	0.200	35.61	0.30	35.91	53.62	17.71	AV
	0.252	27.46	0.35	27.81	51.69	23.88	
	0.408	21.38	0.44	21.82	47.68	25.86	
	3.364	24.84	0.67	25.51	46.00	20.49	
	8.729	24.80	0.96	25.76	50.00	24.24	
	23.888	27.60	1.85	29.45	50.00	20.55	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 48%RH

Serial No. : E20110216-02-01/02 Date of Test : Feb 22, 2011

Test Mode : DVI 640*480@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.192	45.28	0.38	45.66	63.93	18.27	QP
	0.252	38.02	0.42	38.44	61.69	23.25	
	0.408	32.43	0.48	32.91	57.68	24.77	
	3.293	34.58	0.71	35.29	56.00	20.71	
	5.653	29.86	0.83	30.69	60.00	29.31	
	23.888	37.78	1.76	39.54	60.00	20.46	
	0.192	33.34	0.38	33.72	53.93	20.21	AV
	0.252	26.14	0.42	26.56	51.69	25.13	
	0.408	20.62	0.48	21.10	47.68	26.58	
	3.293	22.37	0.71	23.08	46.00	22.92	
	5.653	17.68	0.83	18.51	50.00	31.49	
	23.888	25.64	1.76	27.40	50.00	22.60	
Neutral	0.188	46.41	0.31	46.72	64.11	17.39	QP
	0.252	38.70	0.35	39.05	61.69	22.64	
	0.408	32.79	0.44	33.23	57.68	24.45	
	3.276	35.23	0.66	35.89	56.00	20.11	
	9.107	37.19	0.98	38.17	60.00	21.83	
	23.888	39.50	1.85	41.35	60.00	18.65	
	0.188	34.60	0.31	34.91	54.11	19.20	AV
	0.252	26.90	0.35	27.25	51.69	24.44	
	0.408	20.60	0.44	21.04	47.68	26.64	
	3.276	23.81	0.66	24.47	46.00	21.53	
	9.107	25.40	0.98	26.38	50.00	23.62	
	23.888	27.40	1.85	29.25	50.00	20.75	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 48%RH

Serial No. : E20110216-02-01/02 Date of Test : Feb 22, 2011

Test Mode : DVI 1280*1024@75Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.199	46.34	0.38	46.72	63.67	16.95	QP
	0.253	38.80	0.42	39.22	61.64	22.42	
	0.408	33.02	0.48	33.50	57.68	24.18	
	3.293	34.90	0.71	35.61	56.00	20.39	
	6.056	30.40	0.85	31.25	60.00	28.75	
	23.888	38.24	1.76	40.00	60.00	20.00	
	0.199	34.85	0.38	35.23	53.67	18.44	AV
	0.253	26.50	0.42	26.92	51.64	24.72	
	0.408	21.51	0.48	21.99	47.68	25.69	
	3.293	22.60	0.71	23.31	46.00	22.69	
	6.056	18.90	0.85	19.75	50.00	30.25	
	23.888	26.80	1.76	28.56	50.00	21.44	
Neutral	0.202	45.94	0.30	46.24	63.54	17.30	QP
	0.252	38.62	0.35	38.97	61.69	22.72	
	0.408	34.45	0.44	34.89	57.68	22.79	
	3.293	36.01	0.66	36.67	56.00	19.33	
	8.916	38.19	0.97	39.16	60.00	20.84	
	23.888	39.83	1.85	41.68	60.00	18.32	
	0.202	33.50	0.30	33.80	53.54	19.74	AV
	0.252	26.80	0.35	27.15	51.69	24.54	
	0.408	22.50	0.44	22.94	47.68	24.74	
	3.293	24.01	0.66	24.67	46.00	21.33	
	8.916	26.80	0.97	27.77	50.00	22.23	
	23.888	27.60	1.85	29.45	50.00	20.55	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 48%RH

Serial No. : E20110216-02-01/02 Date of Test : Feb 22, 2011

Test Mode : DVI 1680*1050@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.202	45.94	0.38	46.32	63.54	17.22	QP
	0.252	38.49	0.42	38.91	61.69	22.78	
	0.408	32.46	0.48	32.94	57.68	24.74	
	3.207	34.46	0.71	35.17	56.00	20.83	
	7.446	29.37	0.92	30.29	60.00	29.71	
	23.888	38.18	1.76	39.94	60.00	20.06	
	0.202	34.20	0.38	34.58	53.54	18.96	AV
	0.252	26.80	0.42	27.22	51.69	24.47	
	0.408	20.60	0.48	21.08	47.68	26.60	
	3.207	22.70	0.71	23.41	46.00	22.59	
	7.446	17.60	0.92	18.52	50.00	31.48	
	23.888	26.80	1.76	28.56	50.00	21.44	
Neutral	0.202	45.35	0.30	45.65	63.54	17.89	QP
	0.253	38.66	0.35	39.01	61.64	22.63	
	0.408	33.95	0.44	34.39	57.68	23.29	
	3.276	35.53	0.66	36.19	56.00	19.81	
	9.011	37.22	0.98	38.20	60.00	21.80	
	23.888	40.39	1.85	42.24	60.00	17.76	
	0.202	33.60	0.30	33.90	53.54	19.64	AV
	0.253	26.80	0.35	27.15	51.64	24.49	
	0.408	21.87	0.44	22.31	47.68	25.37	
	3.276	23.81	0.66	24.47	46.00	21.53	
	9.011	25.60	0.98	26.58	50.00	23.42	
	23.888	28.40	1.85	30.25	50.00	19.75	

TEST ENGINEER: WENCY YANG

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 48%RH

Serial No. : E20110216-02-01/02 Date of Test : Feb 22, 2011

Test Mode : DVI 1920*1080@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.190	46.58	0.38	46.96	64.02	17.06	QP
	0.252	38.55	0.42	38.97	61.69	22.72	
	0.408	33.00	0.48	33.48	57.68	24.20	
	3.241	34.97	0.71	35.68	56.00	20.32	
	5.419	29.94	0.82	30.76	60.00	29.24	
	23.888	38.62	1.76	40.38	60.00	19.62	
	0.190	34.80	0.38	35.18	54.02	18.84	AV
	0.252	26.80	0.42	27.22	51.69	24.47	
	0.408	21.21	0.48	21.69	47.68	25.99	
	3.241	23.20	0.71	23.91	46.00	22.09	
	5.419	17.85	0.82	18.67	50.00	31.33	
	23.888	26.87	1.76	28.63	50.00	21.37	
Neutral	0.199	46.13	0.30	46.43	63.67	17.24	QP
	0.252	39.15	0.35	39.50	61.69	22.19	
	0.408	32.99	0.44	33.43	57.68	24.25	
	3.276	35.54	0.66	36.20	56.00	19.80	
	8.916	37.93	0.97	38.90	60.00	21.10	
	23.888	39.26	1.85	41.11	60.00	18.89	
	0.199	34.20	0.30	34.50	53.67	19.17	AV
	0.252	27.60	0.35	27.95	51.69	23.74	
	0.408	20.80	0.44	21.24	47.68	26.44	
	3.276	23.61	0.66	24.27	46.00	21.73	
	8.916	26.10	0.97	27.07	50.00	22.93	
	23.888	27.60	1.85	29.45	50.00	20.55	

TEST ENGINEER: WENCY YANG

4 RADIATED EMISSION TEST

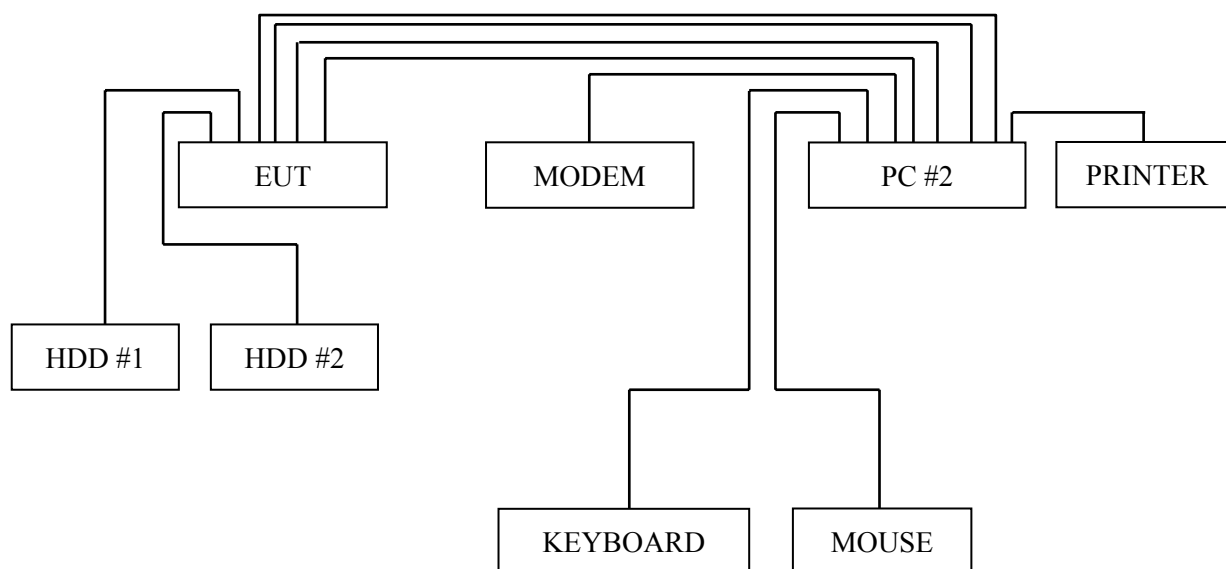
4.1 Test Equipment

The following test equipments are used during the radiated emission test in a semi-anechoic chamber:

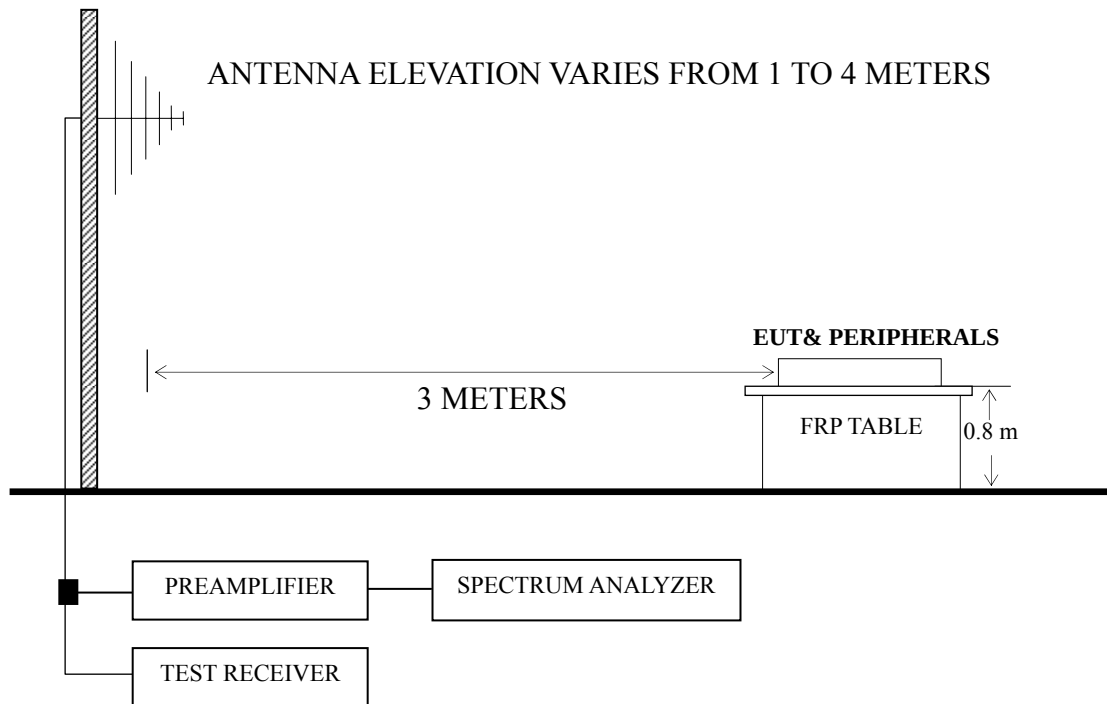
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESVS10	844594/001	Mar 22, 2011	Mar 22, 2012
2.	Preamplifier	Agilent	8447D	2944A10548	Mar 18, 2011	Sep 18, 2011
3.	Preamplifier	HP	8449B	3008A00864	Mar 22, 2011	Mar 22, 2012
4.	Bi-log Antenna	TESEQ	CBL6112D	23192	Dec 01, 2010	Dec 01, 2011
5.	Horn Antenna	EMCO	3115	9607-4878	May 13, 2010	May 13, 2011
6.	Spectrum	Agilent	E7405A	MY45106600	Mar 22, 2011	Mar 22, 2012
7.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426390	Mar 18, 2011	Sep 18, 2011
8.	Software	Audix	E3	SET00200 9912M295-2	--	--

4.2 Block Diagram of Test Setup

4.2.1 EUT and Peripherals



4.2.2 Radiated emission test setup



■ : 50 ohm Coaxial Switch

4.3 Radiated Emission Limit [FCC Part 15 Subpart B 15.109(a)]

Frequency (MHz)	Distance (m)	Field strength limits	
		($\mu\text{V/m}$)	dB ($\mu\text{V/m}$)
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

NOTE 1 - Emission Level dB ($\mu\text{V/m}$) = 20 log Emission Level ($\mu\text{V/m}$)

NOTE 2 - The tighter limit applies at the band edges.

NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

NOTE 4 - The limits shown are based on Quasi-peak value detector below or equal to 1GHz and Average value detector above 1GHz.

NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT.

4.4 Test Configuration

The configuration of the EUT and peripherals are same as those used in conducted emission test.

Please refer to Sec.3.4.

4.5 Operating Condition of EUT

Same as conducted emission test which is listed in Sec.3.5, except for the test setup replaced by Sec.4.2.

4.6 Test Procedures

The EUT and peripherals were placed on a FRP turntable that is 0.8 meter above ground. The FRP turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. Broadband antenna (Calibrated Bilog Antenna) or Horn Antenna was used as receiving antenna. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4:2003 requirements during radiated emission test.

The I.F. bandwidth of Test Receiver R&S ESVS10 was set at 120 kHz below 1GHz and The Spectrum Agilent E7405A was set at 1MHz above 1GHz.

The frequency range from 30 MHz to 1000MHz was checked for all test modes.

The frequency range from 1 GHz to 2 GHz was checked for D-Sub/DVI 1280*1024@75Hz, 1680*1050@60Hz and 1920*1080@60Hz modes.

The test modes were done on radiated disturbance test and all the test results are listed in Sec.4.7.

4.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Test Mode	Page
D-Sub 640*480@60Hz	P25
D-Sub 1280*1024@75Hz	P26 – P27
D-Sub 1680*1050@60Hz	P28 – P29
D-Sub 1920*1080@60Hz	P30 – P31
DVI 640*480@60Hz	P32
DVI 1280*1024@75Hz	P33 – P34
DVI 1680*1050@60Hz	P35 – P36
DVI 1920*1080@60Hz	P37 – P38
DVI 1680*1050@60Hz (Rotation)	P39 – P40

NOTE 1 – **The bold test mode** listed above means the worst test mode.

NOTE 2 – Emission Level = Antenna Factor + Cable Loss + Meter Reading.($< 1\text{GHz}$)

NOTE 3 – Emission Level = Antenna Factor + Cable Loss – Preamp Factor + Meter Reading.($> 1\text{GHz}$)

NOTE 4 – All readings are Quasi-Peak values below or equal to 1GHz, Peak and Average values above 1GHz.

NOTE 5 – The emission levels that are 20dB below the official limit are not reported.

NOTE 6 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 7 – The worst case is for DVI 1680*1050@60Hz test mode. The worst emission at horizontal polarization was detected at 667.290 MHz with corrected signal level of 43.18 dB ($\mu\text{V/m}$) (limit is 46.00 dB ($\mu\text{V/m}$)), when the antenna was 1.00 m height and the turntable was at 130° . The worst emission at vertical polarization was detected at 34.850 MHz with corrected signal level of 35.84 dB ($\mu\text{V/m}$) (limit is 40.00 dB ($\mu\text{V/m}$)), when the antenna was 1.00 m height and the turntable was at 60° .

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 60%RH

Serial No. : E20110216-02-01/02 Date of Test : Apr 02, 2011

Test Mode : D-Sub 640*480@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	138.640	14.47	12.17	1.22	27.86	43.50	15.64
	189.080	22.93	10.24	1.39	34.56	43.50	8.94
	302.570	25.10	13.97	1.73	40.80	46.00	5.20
	322.940	18.32	14.54	1.84	34.70	46.00	11.30
	658.560	5.84	19.49	2.60	27.93	46.00	18.07
	906.880	5.23	21.76	3.05	30.04	46.00	15.96
Vertical	32.910	16.52	17.95	0.62	35.09	40.00	4.91
	97.900	19.95	11.11	1.02	32.08	43.50	11.42
	122.150	17.73	12.91	1.16	31.80	43.50	11.70
	182.290	18.46	9.99	1.38	29.83	43.50	13.67
	297.720	25.64	13.86	1.76	41.26	46.00	4.74
	658.560	13.51	19.49	2.60	35.60	46.00	10.40

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 60%RH

Serial No. : E20110216-02-01/02 Date of Test : Apr 02, 2011

Test Mode : D-Sub 1280*1024@75Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	32.910	16.76	17.95	0.62	--	35.33	40.00	4.67	QP
	98.870	21.51	11.27	1.04	--	33.82	43.50	9.68	
	123.120	18.41	12.86	1.16	--	32.43	43.50	11.07	
	302.570	25.18	13.97	1.73	--	40.88	46.00	5.12	
	365.620	15.53	15.73	1.96	--	33.22	46.00	12.78	
	658.560	12.77	19.49	2.60	--	34.86	46.00	11.14	
	1041.000	48.32	22.69	4.49	37.33	38.17	74.00	35.83	PK
	1201.000	47.87	23.74	4.51	37.00	39.12	74.00	34.88	
	1334.000	47.86	24.78	4.53	36.71	40.46	74.00	33.54	
	1467.000	47.89	25.60	4.55	36.36	41.68	74.00	32.32	
	1600.000	49.16	26.40	4.56	36.10	44.02	74.00	29.98	
	1716.000	47.00	26.71	4.57	35.92	42.36	74.00	31.64	
	1041.000	41.32	22.69	4.49	37.33	31.17	54.00	22.83	AV
	1201.000	34.87	23.74	4.51	37.00	26.12	54.00	27.88	
	1334.000	37.86	24.78	4.53	36.71	30.46	54.00	23.54	
	1467.000	38.89	25.60	4.55	36.36	32.68	54.00	21.32	
	1600.000	41.16	26.40	4.56	36.10	36.02	54.00	17.98	
	1716.000	37.00	26.71	4.57	35.92	32.36	54.00	21.64	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 60%RH

Serial No. : E20110216-02-01/02 Date of Test : Apr 02, 2011

Test Mode : D-Sub 1280*1024@75Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	127.970	13.60	12.63	1.16	--	27.39	43.50	16.11	QP
	146.400	15.65	11.61	1.23	--	28.49	43.50	15.01	
	180.350	23.85	9.90	1.36	--	35.11	43.50	8.39	
	303.540	25.04	14.00	1.75	--	40.79	46.00	5.21	
	334.580	17.94	14.86	1.84	--	34.64	46.00	11.36	
	702.210	16.19	19.73	2.71	--	38.63	46.00	7.37	
	1031.000	50.82	22.60	4.49	37.34	40.57	74.00	33.43	PK
	1200.000	50.51	23.70	4.51	37.00	41.72	74.00	32.28	
	1286.000	48.80	24.40	4.53	36.82	40.91	74.00	33.09	
	1600.000	51.50	26.40	4.56	36.10	46.36	74.00	27.64	
	1799.000	48.35	26.90	4.58	35.81	44.02	74.00	29.98	
	1944.000	45.35	27.76	4.75	35.65	42.21	74.00	31.79	
	1031.000	42.82	22.60	4.49	37.34	32.57	54.00	21.43	AV
	1200.000	39.51	23.70	4.51	37.00	30.72	54.00	23.28	
	1286.000	37.80	24.40	4.53	36.82	29.91	54.00	24.09	
	1600.000	38.50	26.40	4.56	36.10	33.36	54.00	20.64	
	1799.000	41.35	26.90	4.58	35.81	37.02	54.00	16.98	
	1944.000	34.35	27.76	4.75	35.65	31.21	54.00	22.79	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 60%RH

Serial No. : E20110216-02-01/02 Date of Test : Apr 02, 2011

Test Mode : D-Sub 1680*1050@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	127.000	13.91	12.66	1.17	--	27.74	43.50	15.76	QP
	147.370	16.15	11.51	1.24	--	28.90	43.50	14.60	
	187.140	24.61	10.17	1.38	--	36.16	43.50	7.34	
	303.540	25.57	14.00	1.75	--	41.32	46.00	4.68	
	322.940	19.74	14.54	1.84	--	36.12	46.00	9.88	
	702.210	13.11	19.73	2.71	--	35.55	46.00	10.45	
	1041.000	53.32	22.69	4.49	37.33	43.17	74.00	30.83	PK
	1101.000	52.11	23.11	4.50	37.20	42.52	74.00	31.48	
	1201.000	52.87	23.74	4.51	37.00	44.12	74.00	29.88	
	1264.000	51.32	24.23	4.52	36.86	43.21	74.00	30.79	
	1467.000	52.89	25.60	4.55	36.36	46.68	74.00	27.32	
	1716.000	52.00	26.71	4.57	35.92	47.36	74.00	26.64	
	1041.000	43.32	22.69	4.49	37.33	33.17	54.00	20.83	AV
	1101.000	38.11	23.11	4.50	37.20	28.52	54.00	25.48	
	1201.000	39.87	23.74	4.51	37.00	31.12	54.00	22.88	
	1264.000	38.32	24.23	4.52	36.86	30.21	54.00	23.79	
	1467.000	39.89	25.60	4.55	36.36	33.68	54.00	20.32	
	1716.000	40.00	26.71	4.57	35.92	35.36	54.00	18.64	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 60%RH

Serial No. : E20110216-02-01/02 Date of Test : Apr 02, 2011

Test Mode : D-Sub 1680*1050@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	32.910	17.06	17.95	0.62	--	35.63	40.00	4.37	QP
	98.870	21.05	11.27	1.04	--	33.36	43.50	10.14	
	127.000	19.38	12.66	1.17	--	33.21	43.50	10.29	
	197.810	19.82	10.60	1.44	--	31.86	43.50	11.64	
	303.540	24.73	14.00	1.75	--	40.48	46.00	5.52	
	658.560	13.20	19.49	2.60	--	35.29	46.00	10.71	
	1031.000	56.82	22.60	4.49	37.34	46.57	74.00	27.43	PK
	1200.000	56.51	23.70	4.51	37.00	47.72	74.00	26.28	
	1333.000	54.06	24.74	4.53	36.71	46.62	74.00	27.38	
	1676.000	53.05	26.59	4.57	35.97	48.24	74.00	25.76	
	1840.000	52.75	27.12	4.64	35.77	48.74	74.00	25.26	
	1944.000	51.35	27.76	4.75	35.65	48.21	74.00	25.79	
	1031.000	44.82	22.60	4.49	37.34	34.57	54.00	19.43	AV
	1200.000	44.51	23.70	4.51	37.00	35.72	54.00	18.28	
	1333.000	40.06	24.74	4.53	36.71	32.62	54.00	21.38	
	1676.000	41.05	26.59	4.57	35.97	36.24	54.00	17.76	
	1840.000	41.75	27.12	4.64	35.77	37.74	54.00	16.26	
	1944.000	40.35	27.76	4.75	35.65	37.21	54.00	16.79	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 60%RH

Serial No. : E20110216-02-01/02 Date of Test : Apr 02, 2011

Test Mode : D-Sub 1920*1080@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	32.910	17.07	17.95	0.62	--	35.64	40.00	4.36	QP
	48.430	19.05	9.62	0.75	--	29.42	40.00	10.58	
	98.870	21.74	11.27	1.04	--	34.05	43.50	9.45	
	125.060	19.45	12.76	1.13	--	33.34	43.50	10.16	
	302.570	24.84	13.97	1.73	--	40.54	46.00	5.46	
	658.560	14.12	19.49	2.60	--	36.21	46.00	9.79	
	1041.000	51.32	22.69	4.49	37.33	41.17	74.00	32.83	PK
	1201.000	50.87	23.74	4.51	37.00	42.12	74.00	31.88	
	1334.000	50.86	24.78	4.53	36.71	43.46	74.00	30.54	
	1467.000	50.89	25.60	4.55	36.36	44.68	74.00	29.32	
	1600.000	52.16	26.40	4.56	36.10	47.02	74.00	26.98	
	1716.000	50.00	26.71	4.57	35.92	45.36	74.00	28.64	
	1041.000	39.32	22.69	4.49	37.33	29.17	54.00	24.83	AV
	1201.000	39.87	23.74	4.51	37.00	31.12	54.00	22.88	
	1334.000	40.86	24.78	4.53	36.71	33.46	54.00	20.54	
	1467.000	42.89	25.60	4.55	36.36	36.68	54.00	17.32	
	1600.000	46.16	26.40	4.56	36.10	41.02	54.00	12.98	
	1716.000	39.00	26.71	4.57	35.92	34.36	54.00	19.64	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 60%RH

Serial No. : E20110216-02-01/02 Date of Test : Apr 02, 2011

Test Mode : D-Sub 1920*1080@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	98.870	14.12	11.27	1.04	--	26.43	43.50	17.07	QP
	145.430	16.97	11.66	1.22	--	29.85	43.50	13.65	
	185.200	24.44	10.08	1.39	--	35.91	43.50	7.59	
	302.570	25.12	13.97	1.73	--	40.82	46.00	5.18	
	334.580	20.44	14.86	1.84	--	37.14	46.00	8.86	
	702.210	15.81	19.73	2.71	--	38.25	46.00	7.75	
	1031.000	52.82	22.60	4.49	37.34	42.57	74.00	31.43	PK
	1200.000	52.51	23.70	4.51	37.00	43.72	74.00	30.28	
	1286.000	50.80	24.40	4.53	36.82	42.91	74.00	31.09	
	1396.000	49.57	25.16	4.54	36.55	42.72	74.00	31.28	
	1676.000	49.05	26.59	4.57	35.97	44.24	74.00	29.76	
	1799.000	50.35	26.90	4.58	35.81	46.02	74.00	27.98	
	1031.000	46.82	22.60	4.49	37.34	36.57	54.00	17.43	AV
	1200.000	41.51	23.70	4.51	37.00	32.72	54.00	21.28	
	1286.000	37.80	24.40	4.53	36.82	29.91	54.00	24.09	
	1396.000	41.57	25.16	4.54	36.55	34.72	54.00	19.28	
	1676.000	39.05	26.59	4.57	35.97	34.24	54.00	19.76	
	1799.000	41.35	26.90	4.58	35.81	37.02	54.00	16.98	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 60%RH

Serial No. : E20110216-02-01/02 Date of Test : Apr 02, 2011

Test Mode : DVI 640*480@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	129.910	13.59	12.52	1.13	27.24	43.50	16.26
	144.460	15.29	11.76	1.21	28.26	43.50	15.24
	188.110	21.49	10.20	1.39	33.08	43.50	10.42
	302.570	24.07	13.97	1.73	39.77	46.00	6.23
	702.210	11.12	19.73	2.71	33.56	46.00	12.44
	833.160	16.68	21.01	2.92	40.61	46.00	5.39
Vertical	32.910	16.43	17.95	0.62	35.00	40.00	5.00
	95.960	20.27	10.70	1.01	31.98	43.50	11.52
	142.520	14.80	11.91	1.21	27.92	43.50	15.58
	173.560	16.13	10.09	1.32	27.54	43.50	15.96
	301.600	24.85	13.97	1.74	40.56	46.00	5.44
	364.650	11.33	15.73	1.97	29.03	46.00	16.97

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 60%RH

Serial No. : E20110216-02-01/02 Date of Test : Apr 02, 2011

Test Mode : DVI 1280*1024@75Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	142.520	15.90	11.91	1.21	--	29.02	43.50	14.48	QP
	181.320	19.03	9.93	1.36	--	30.32	43.50	13.18	
	242.430	16.48	12.64	1.58	--	30.70	46.00	15.30	
	301.600	23.74	13.97	1.74	--	39.45	46.00	6.55	
	694.450	14.68	19.67	2.64	--	36.99	46.00	9.01	
	833.160	9.31	21.01	2.92	--	33.24	46.00	12.76	
	1041.000	46.32	22.69	4.49	37.33	36.17	74.00	37.83	PK
	1264.000	44.32	24.23	4.52	36.86	36.21	74.00	37.79	
	1393.000	45.61	25.16	4.54	36.55	38.76	74.00	35.24	
	1467.000	45.89	25.60	4.55	36.36	39.68	74.00	34.32	
	1600.000	47.16	26.40	4.56	36.10	42.02	74.00	31.98	
	1797.000	44.70	26.90	4.58	35.81	40.37	74.00	33.63	
	1041.000	39.32	22.69	4.49	37.33	29.17	54.00	24.83	AV
	1264.000	30.32	24.23	4.52	36.86	22.21	54.00	31.79	
	1393.000	35.61	25.16	4.54	36.55	28.76	54.00	25.24	
	1467.000	34.89	25.60	4.55	36.36	28.68	54.00	25.32	
	1600.000	40.16	26.40	4.56	36.10	35.02	54.00	18.98	
	1797.000	33.70	26.90	4.58	35.81	29.37	54.00	24.63	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 60%RH

Serial No. : E20110216-02-01/02 Date of Test : Apr 02, 2011

Test Mode : DVI 1280*1024@75Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	34.850	18.06	16.97	0.67	--	35.70	40.00	4.30	QP
	48.430	19.52	9.62	0.75	--	29.89	40.00	10.11	
	95.960	21.23	10.70	1.01	--	32.94	43.50	10.56	
	303.540	25.31	14.00	1.75	--	41.06	46.00	4.94	
	555.740	15.17	18.65	2.39	--	36.21	46.00	9.79	
	833.160	13.98	21.01	2.92	--	37.91	46.00	8.09	
	1031.000	48.82	22.60	4.49	37.34	38.57	74.00	35.43	PK
	1200.000	48.51	23.70	4.51	37.00	39.72	74.00	34.28	
	1286.000	46.80	24.40	4.53	36.82	38.91	74.00	35.09	
	1498.000	50.44	25.80	4.55	36.30	44.49	74.00	29.51	
	1600.000	49.50	26.40	4.56	36.10	44.36	74.00	29.64	
	1676.000	45.05	26.59	4.57	35.97	40.24	74.00	33.76	
	1031.000	41.82	22.60	4.49	37.34	31.57	54.00	22.43	AV
	1200.000	36.51	23.70	4.51	37.00	27.72	54.00	26.28	
	1286.000	32.80	24.40	4.53	36.82	24.91	54.00	29.09	
	1498.000	36.44	25.80	4.55	36.30	30.49	54.00	23.51	
	1600.000	38.50	26.40	4.56	36.10	33.36	54.00	20.64	
	1676.000	33.05	26.59	4.57	35.97	28.24	54.00	25.76	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 60%RH

Serial No. : E20110216-02-01/02 Date of Test : Apr 02, 2011

Test Mode : DVI 1680*1050@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	142.520	16.02	11.91	1.21	--	29.14	43.50	14.36	QP
	188.110	21.79	10.20	1.39	--	33.38	43.50	10.12	
	302.570	24.68	13.97	1.73	--	40.38	46.00	5.62	
	365.620	10.37	15.73	1.96	--	28.06	46.00	17.94	
	667.290	21.02	19.55	2.61	--	43.18	46.00	2.82	
	833.160	16.52	21.01	2.92	--	40.45	46.00	5.55	
	1041.000	54.32	22.69	4.49	37.33	44.17	74.00	29.83	PK
	1101.000	53.11	23.11	4.50	37.20	43.52	74.00	30.48	
	1201.000	53.87	23.74	4.51	37.00	45.12	74.00	28.88	
	1264.000	52.32	24.23	4.52	36.86	44.21	74.00	29.79	
	1558.000	51.23	26.19	4.56	36.18	45.80	74.00	28.20	
	1634.000	51.57	26.49	4.57	36.04	46.59	74.00	27.41	
	1041.000	41.32	22.69	4.49	37.33	31.17	54.00	22.83	AV
	1101.000	40.11	23.11	4.50	37.20	30.52	54.00	23.48	
	1201.000	43.87	23.74	4.51	37.00	35.12	54.00	18.88	
	1264.000	43.32	24.23	4.52	36.86	35.21	54.00	18.79	
	1558.000	42.23	26.19	4.56	36.18	36.80	54.00	17.20	
	1634.000	40.57	26.49	4.57	36.04	35.59	54.00	18.41	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 60%RH

Serial No. : E20110216-02-01/02 Date of Test : Apr 02, 2011

Test Mode : DVI 1680*1050@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	34.850	18.20	16.97	0.67	--	35.84	40.00	4.16	QP
	96.930	19.63	10.87	1.02	--	31.52	43.50	11.98	
	128.940	16.99	12.58	1.14	--	30.71	43.50	12.79	
	301.600	24.90	13.97	1.74	--	40.61	46.00	5.39	
	555.740	16.02	18.65	2.39	--	37.06	46.00	8.94	
	833.160	12.65	21.01	2.92	--	36.58	46.00	9.42	
	1024.000	54.53	22.57	4.49	37.36	44.23	74.00	29.77	PK
	1125.000	54.35	23.27	4.50	37.16	44.96	74.00	29.04	
	1286.000	52.80	24.40	4.53	36.82	44.91	74.00	29.09	
	1388.000	50.22	25.13	4.54	36.56	43.33	74.00	30.67	
	1676.000	51.05	26.59	4.57	35.97	46.24	74.00	27.76	
	1944.000	49.35	27.76	4.75	35.65	46.21	74.00	27.79	
	1024.000	47.53	22.57	4.49	37.36	37.23	54.00	16.77	AV
	1125.000	43.35	23.27	4.50	37.16	33.96	54.00	20.04	
	1286.000	41.80	24.40	4.53	36.82	33.91	54.00	20.09	
	1388.000	41.22	25.13	4.54	36.56	34.33	54.00	19.67	
	1676.000	41.05	26.59	4.57	35.97	36.24	54.00	17.76	
	1944.000	37.35	27.76	4.75	35.65	34.21	54.00	19.79	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 60%RH

Serial No. : E20110216-02-01/02 Date of Test : Apr 02, 2011

Test Mode : DVI 1920*1080@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	164.830	23.29	10.35	1.31	--	34.95	43.50	8.55	QP
	255.040	15.61	13.01	1.61	--	30.23	46.00	15.77	
	279.290	20.58	13.52	1.68	--	35.78	46.00	10.22	
	303.540	21.18	14.00	1.75	--	36.93	46.00	9.07	
	614.910	7.34	19.27	2.49	--	29.10	46.00	16.90	
	833.160	8.48	21.01	2.92	--	32.41	46.00	13.59	
	1041.000	46.32	22.69	4.49	37.33	36.17	74.00	37.83	PK
	1334.000	45.86	24.78	4.53	36.71	38.46	74.00	35.54	
	1467.000	45.89	25.60	4.55	36.36	39.68	74.00	34.32	
	1600.000	47.16	26.40	4.56	36.10	42.02	74.00	31.98	
	1716.000	45.00	26.71	4.57	35.92	40.36	74.00	33.64	
	1797.000	44.70	26.90	4.58	35.81	40.37	74.00	33.63	
	1041.000	39.32	22.69	4.49	37.33	29.17	54.00	24.83	AV
	1334.000	32.86	24.78	4.53	36.71	25.46	54.00	28.54	
	1467.000	33.89	25.60	4.55	36.36	27.68	54.00	26.32	
	1600.000	34.16	26.40	4.56	36.10	29.02	54.00	24.98	
	1716.000	37.00	26.71	4.57	35.92	32.36	54.00	21.64	
	1797.000	31.70	26.90	4.58	35.81	27.37	54.00	26.63	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 60%RH

Serial No. : E20110216-02-01/02 Date of Test : Apr 02, 2011

Test Mode : DVI 1920*1080@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	35.820	18.29	16.45	0.67	--	35.41	40.00	4.59	QP
	96.930	20.24	10.87	1.02	--	32.13	43.50	11.37	
	301.600	25.42	13.97	1.74	--	41.13	46.00	4.87	
	555.740	15.16	18.65	2.39	--	36.20	46.00	9.80	
	833.160	12.16	21.01	2.92	--	36.09	46.00	9.91	
	971.870	12.40	22.22	3.16	--	37.78	54.00	16.22	
	1031.000	47.82	22.60	4.49	37.34	37.57	74.00	36.43	PK
	1200.000	47.51	23.70	4.51	37.00	38.72	74.00	35.28	
	1396.000	44.57	25.16	4.54	36.55	37.72	74.00	36.28	
	1498.000	49.44	25.80	4.55	36.30	43.49	74.00	30.51	
	1600.000	48.50	26.40	4.56	36.10	43.36	74.00	30.64	
	1799.000	45.35	26.90	4.58	35.81	41.02	74.00	32.98	
	1031.000	38.82	22.60	4.49	37.34	28.57	54.00	25.43	AV
	1200.000	36.51	23.70	4.51	37.00	27.72	54.00	26.28	
	1396.000	34.57	25.16	4.54	36.55	27.72	54.00	26.28	
	1498.000	39.44	25.80	4.55	36.30	33.49	54.00	20.51	
	1600.000	41.50	26.40	4.56	36.10	36.36	54.00	17.64	
	1799.000	33.35	26.90	4.58	35.81	29.02	54.00	24.98	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 60%RH

Serial No. : E20110216-02-01/02 Date of Test : Apr 02, 2011

Test Mode : DVI 1680*1050@60Hz
(Rotation)

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	48.430	18.71	9.62	0.77	--	29.10	40.00	10.90	QP
	138.640	17.03	12.17	1.21	--	30.41	43.50	13.09	
	255.040	21.59	13.01	1.62	--	36.22	46.00	9.78	
	509.180	10.47	18.01	2.27	--	30.75	46.00	15.25	
	555.740	10.04	18.65	2.39	--	31.08	46.00	14.92	
	800.180	10.91	20.70	2.89	--	34.50	46.00	11.50	
	1075.000	47.82	25.21	4.50	37.26	40.27	74.00	33.73	PK
	1250.000	44.58	26.08	4.52	36.90	38.28	74.00	35.72	
	1365.000	43.94	26.59	4.54	36.62	38.45	74.00	35.55	
	1520.000	35.65	27.02	4.55	36.24	30.98	74.00	43.02	
	1665.000	38.06	27.14	4.57	36.00	33.77	74.00	40.23	
	1760.000	39.87	27.23	4.58	35.86	35.82	74.00	38.18	
	1075.000	41.82	25.21	4.50	37.26	34.27	54.00	19.73	AV
	1250.000	32.58	26.08	4.52	36.90	26.28	54.00	27.72	
	1365.000	27.94	26.59	4.54	36.62	22.45	54.00	31.55	
	1520.000	21.65	27.02	4.55	36.24	16.98	54.00	37.02	
	1665.000	27.06	27.14	4.57	36.00	22.77	54.00	31.23	
	1760.000	29.87	27.23	4.58	35.86	25.82	54.00	28.18	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PUX Humidity : 60%RH

Serial No. : E20110216-02-01/02 Date of Test : Apr 02, 2011

Test Mode : DVI 1680*1050@60Hz
(Rotation)

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	31.940	17.62	18.49	0.65	--	36.76	40.00	3.24	QP
	65.890	28.39	6.54	0.87	--	35.80	40.00	4.20	
	82.380	27.20	8.19	0.96	--	36.35	40.00	3.65	
	148.340	26.66	11.41	1.23	--	39.30	43.50	4.20	
	196.840	27.90	10.57	1.44	--	39.91	43.50	3.59	
	516.940	18.91	18.12	2.29	--	39.32	46.00	6.68	
	1080.000	50.23	25.24	4.50	37.25	42.72	74.00	31.28	PK
	1185.000	49.36	25.74	4.51	37.04	42.57	74.00	31.43	
	1315.000	49.23	26.39	4.53	36.75	43.40	74.00	30.60	
	1500.000	45.93	27.00	4.55	36.30	41.18	74.00	32.82	
	1600.000	51.55	27.08	4.56	36.10	47.09	74.00	26.91	
	1760.000	52.77	27.23	4.58	35.86	48.72	74.00	25.28	
	1080.000	40.23	25.24	4.50	37.25	32.72	54.00	21.28	AV
	1185.000	35.36	25.74	4.51	37.04	28.57	54.00	25.43	
	1315.000	37.23	26.39	4.53	36.75	31.40	54.00	22.60	
	1500.000	36.93	27.00	4.55	36.30	32.18	54.00	21.82	
	1600.000	38.55	27.08	4.56	36.10	34.09	54.00	19.91	
	1760.000	44.77	27.23	4.58	35.86	40.72	54.00	13.28	

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.

6 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Specifications (mm)	Manufacturer	Location
Al Tape	LG END 3940TKK043C	50*120	EXPAN Electronics SuZhou co.,Ltd	See Internal Photos Figure 1
Sponge	LG END 3940TKK043C	28*10*1	EXPAN Electronics SuZhou co.,Ltd	See Internal Photos Figure 11
		120*10*1		
		295*10*1		
		155*10*1		
		120*10*1		

Note: We had required the applicant and manufacturer that all electrical and mechanical devices employed for spurious radiation suppression, including any modifications made during certification testing, must be incorporated in each unit marked

TEST ENGINEER:


(RAVEN JIN)